



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,235	02/18/2004	Hiroyuki YAMAUCHI	28569.5836	2234
20322	7590	06/08/2005	EXAMINER	
SNELL & WILMER ONE ARIZONA CENTER 400 EAST VAN BUREN PHOENIX, AZ 850040001			CHO, JAMES HYONCHOL	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Sm

Office Action Summary	Application No.		Applicant(s)	
	10/708,235		YAMAUCHI ET AL.	
	Examiner		Art Unit	
	James Cho		2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/553,308.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/04, 4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Levesque (US PAT No. 5,422,608).

Regarding claim 1, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus, comprising; a transmitting device (12) for transmitting data; a receiving device for receiving the data (circuit coupled to the right end of 10); and a data line for transmitting the data (10), wherein the transmitting device and the receiving device are connected to each other through the data line (transmission line 10 connecting 12 and 14), the transmitting device comprising: a driver circuit (12) for outputting the data to the data line, the receiving device comprising; a terminating resistor (34; variable resistor; col. 5, lines 60-62) connected to the data line; a receiver circuit (14) for detecting the data from the data line; and a bias generating means (34, 36, 38, 40, 42, 44, 46, 48, 52) for generating a bias voltage to be applied to the terminating resistor, the bias generating means setting the bias voltage based on the potential of the data line (col. 6, lines 22-31).

Art Unit: 2819

Regarding claim 2, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus according to claim 1, wherein the bias generating means comprises a bias generating circuit (38) and a reference voltage generating circuit (44, 46).

Regarding claim 3, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus according to claim 1, where the data line comprises a pair of differential lines (10 and ground pair form differential lines).

Regarding claim 5, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus according to claim 1, further comprising a ground interconnect line (ground line noted by ground notation) for connecting a ground of the transmitting device and a ground of the receiving device (transmission line 10, e.g. RG174 has a ground sheeting; col. 5, line 6).

Regarding claim 6, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus according to claim 1, wherein the data line has flexibility (transmission line, e.g. RG174 is flexible).

Regarding claim 7, Fig. 7 of Levesque teaches a signal transmitting/receiving apparatus according to claim 5, wherein the ground interconnect line has flexibility (ground sheeting for RG 174 is flexible).

Art Unit: 2819

Regarding claim 8, Fig. 7 of Levesque teaches a receiving device data (circuit coupled to the right end of 10) connected to a data line (10) which transmits data, so as to receive the data from the transmitting device, the transmitting device comprising a driver circuit (12) for outputting the data to the data line, the receiving device comprising: a terminating resistor data to the data line, the receiving device comprising; a terminating resistor (34; variable resistor; col. 5, lines 60-62) connected to the data line; a receiver circuit (14) for detecting the data from the data line ; and a bias generating means (34,36,38,40,42,44,46,48,52) for generating the bias voltage and outputting the bias voltage to the terminating resistor, the bias generating means setting a bias voltage based on a potential of the data line (col. 6, lines 22-31).

Regarding claim 9, Fig. 7 of Levesque teaches a receiving device according to claim 8, wherein the bias generating means comprises a bias generating circuit (38) and a reference voltage generating circuit (44, 46).

Regarding claim 11, Fig. 7 of Levesque teaches a receiving device according to claim 8, further connected to a ground interconnect line which transmits a ground potential of the transmitting device (ground line noted by ground notation; transmission line 10, e.g. RG174 has a ground sheeting; col. 5, line 6).

Allowable Subject Matter

Claims 12-14 are allowable over the prior art of record.

Art Unit: 2819

Claims 4 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although Levesque teaches an adaptive transmission line termination, one of ordinary skill in the art would not have been motivated to modify the teaching of Levesque to further includes, among other things, the specific of at least one bias generating means for generating a bias voltage to be applied to the plurality of terminating resistors as required by claims 12-14 and the specifics of the terminating resistor being connected so as to short circuit between the pair of differential lines where the bias voltage is applied to substantially a midpoint of the terminating resistor as required by claims 4 and 10.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Partow et al. (US PAT No. 6,720,795) discloses an active termination network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax

Art Unit: 2819

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "James H. Cho". The signature is fluid and cursive, with the first name "James" and last name "Cho" clearly distinguishable.

James H. Cho
Primary Examiner
Art Unit 2819

June 3, 2005